

CASE NO.: 1006-28.CIP
Serial No.: 10/699,108
January 10, 2005
Page 2

PATENT
Filed: October 31, 2003

1. (currently amended) A powered assembly, comprising:

at least one object that can be moved between a first configuration and a second configuration, the object being selected from the group consisting of window coverings, awnings, skylight coverings, curtains, and screens, the object having a head rail;

at least one enclosure in the head rail;

at least one motor in the enclosure;

at least one actuator coupled to the motor and the object to move the object when the motor is energized, the motor turning a rotating member; and

plural permanent magnets configured for fitting within the enclosure and juxtaposed with the rotating member and magnetically coupled thereto to output signals when the rotating member rotates useful in determining at least one of: a position, and a direction of rotation, of the motor, the magnets magnetically braking the rotating member from turning when the motor is deenergized.

2. (original) The assembly of Claim 1, comprising at least one pickup coil juxtaposed with the rotating member for generating pulses as the rotating member rotates past the magnets.

3. (original) The powered assembly of Claim 1, wherein the motor is powered by at least one dc battery.

4. (original) The powered assembly of Claim 2, wherein the object is a window covering.

1006-28C.AMD

CASE NO.: 1006-28.CIP
Serial No.: 10/699,108
January 10, 2005
Page 3

PATENT
Filed: October 31, 2003

5. (original) The powered assembly of Claim 2, wherein the rotating member includes an elongated ferromagnetic element coupled to a rotor of the motor to rotate when the rotor rotates.

6. (currently amended) The powered assembly of Claim 5, wherein the ferromagnetic element rotates in a plane and the magnets are disposed in the plane, ~~closely spaced from the plane~~.

7. (original) The powered assembly of Claim 6, comprising four magnets.

8. (currently amended) The powered assembly of Claim 7, comprising two cylindrical bobbins, each holding two magnets in close juxtaposition with the ferromagnetic element.

9. (currently amended) The powered assembly of Claim 8, wherein the north pole of one of the magnets of one bobbin is oriented toward the rotating member whereas the south pole of one magnet of the opposite bobbin is oriented toward the rotating member, ~~wherein the bobbins are oriented in tandem with each other~~.

10. (original) The powered assembly of Claim 9, comprising respective wire wound around each respective bobbin to establish respective pickup coils, the pickup coils being connected together in series.

1006-28C.AMD

BEST AVAILABLE COPY

CASE NO.: 1006-28.CIP
Serial No.: 10/699,108
January 10, 2005
Page 4

PATENT
Filed: October 31, 2003

11. (currently amended) The powered assembly of Claim 5, wherein the ferromagnetic element rotates in a plane and at least some magnets are disposed in the plane, the ferromagnetic element being elongated in a transverse dimension relative to the axis of rotation of the rotating element.

12. (currently amended) A drive assembly for a movable object including a rod, comprising:
an electrically-powered drive structure couplable to the rod to move the object when the drive structure is energized, the drive structure having a rotating ~~component~~ member, the rotating member including a ferromagnetic element coupled to a rotor of the drive structure, the ferromagnetic element being elongated in the transverse dimension relative to the axis of rotation of the rotor;

plural braking magnets closely spaced from the rotating member and generating pulses when the rotating member rotates past the magnets; and

at least one coil juxtaposed with the magnets and sensing the pulses to output a signal representative at least of a direction of rotation.

13. (original) The assembly of Claim 12, wherein the drive structure is powered by at least one dc battery.

14. (original) The assembly of Claim 13, wherein the object is selected from the group consisting of window coverings, awnings, skylight coverings, curtains, and screens.

1006-28C.AMD

CASE NO.: 1006-28.CIP
Serial No.: 10/699,108
January 10, 2005
Page 5

PATENT
Filed: October 31, 2003

15. (original) The assembly of Claim 12, wherein the magnets are magnetically coupled to the rotating member sufficiently to stop the rotating member from rotating when the drive structure is deenergized.

16. (currently amended) The drive assembly of Claim 12, wherein at least one magnet has a curved surface facing the elongated ferromagnetic element. ~~the rotating member includes an elongated ferromagnetic element coupled to a rotor of the drive structure to rotate when the rotor rotates.~~

17. (original) The drive assembly of Claim 16, wherein the ferromagnetic element rotates in a plane and the magnets are closely spaced from the plane.

18. (original) The drive assembly of Claim 17, comprising four magnets.

19. (original) The drive assembly of Claim 18, comprising two bobbins, each holding two magnets in close juxtaposition with the ferromagnetic element.

20. (original) The drive assembly of Claim 19, wherein the bobbins are oriented in tandem with each other.

21. (original) The drive assembly of Claim 20, comprising respective wire wound around each respective bobbin to establish respective pickup coils, the pickup coils being connected together in series.

1006-28C.AMD

CASE NO.: 1006-28.CIP
Serial No.: 10/699,108
January 10, 2005
Page 6

PATENT
Filed: October 31, 2003

22. (original) The drive assembly of Claim 16, wherein the ferromagnetic element rotates in a plane and at least some magnets are disposed in the plane.

23. (currently amended) A method for operating an object that can be moved between a first configuration and a second configuration, the object being selected from the group consisting of window coverings, awnings, skylight coverings, curtains, and screens, the method comprising:

providing a drive structure;

coupling the drive structure to the object such that the object is moved when the drive structure is energized;

closely juxtaposing plural magnets with the drive structure, the number and size of the magnets being established to brake the drive structure, when deenergized, from turning under the weight of the object;

using the magnets to brake the drive structure when the drive structure is not energized; and

sensing signals generated when the drive structure rotates past the magnets to determine at least one of: a position of the drive structure, and a direction of motion of the drive structure.

1006-28.C.AMD

BEST AVAILABLE COPY